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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,751	04/14/2004	Kuo-Rong Chen	OP-093000043	5075

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EXAMINER
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GUHARAY, KARABI

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 03/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/823,751

Applicant(s)

CHEN ET AL.

Examiner

Karabi Guharay

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on Election, filed on 1/12/06.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 10-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 6-8 is/are rejected.
- 7) ☒ Claim(s) 3,5 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Election/Restrictions***

Applicant's election without traverse of Group I, including claims 1-9 in the reply filed on 1/12/06, is acknowledged.

Claims 10-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the first conductive plate". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4, 6, & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Lee et al. (US 2002/0017875).

Regarding claim 1, Lee et al. disclose a mesh structure (grid plate 6 of Fig 3) disposed between a plurality of anode units (24b, paragraph 50) and cathode units (16, 18) of a tetrodes field emission display (see Fig 2 & 3), comprising a first conductive layer (22) serves as converging electrode layer having a proximal surface facing the anode units and a distal surface opposing to the proximal surface, the first conductive layer comprising a plurality of first apertures extending therethrough, a glass plate (6, paragraph 44) formed on the distal end of the first conductive layer to as an insulation layer, the glass plate (6) including a plurality of second apertures (6a) extending therethrough , and a second conductive layer (22) formed on the glass plate (6) to serve as a gate electrode layer the second conductive layer having a proximal surface facing the cathode lines (16, 18) and a distal surface opposing to the proximal surface wherein the second conductive layer includes a plurality of third apertures extending therethrough and aligned with the first and second apertures (Fig 3, paragraph 46).

Regarding claim 2, Lee et al. disclose that each second aperture is aligned with one corresponding first aperture (Fig 3).

Regarding claim 4, Lee et al. disclose that each third aperture covers is aligned with one corresponding first aperture (Fig 3).

Regarding claim 6, Lee et al. disclose a tetra-polar filed emission display (Fig 3 & Fig 9) comprising a converging electrode layer (22) having an array of first apertures extending therethrough; an insulating layer (glass plate 6, paragraph 44) having one side adjacent to the converging electrode layer, the insulating layer (6) having a plurality of second apertures (6a) aligned with the first apertures; and a gate layer including

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plurality of conductive lines (20 of Fig 9) formed on the insulating layer (6) at one side opposite to the side adjacent to the converging electrode layer (22 or 34 ), wherein each of the conductive lines (20) is aligned with a portion of the converging electrode layer (22) between one pair of neighboring rows of the first apertures ( Fig 3, paragraph 46).

Regarding claim 8, Lee et al. disclose that each second aperture is aligned with one corresponding first aperture (Fig 3).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. as applied to claim 6 above, and further in view of Russ et al. (US 6515429).

Regarding claim 7, Lee et al. discloses all the limitations except for the gate layer being a hollow frame within which conductive lines extend.

However, in the same field of Field emission display (Fig 9), Russ discloses a gate structure (602 of Fig 6) comprising a hollow frame within which gate wires (604) are extending. Russ further teaches that such gate structure provides an analog like variable resolution of the display (lines 60-67 of column 5).

Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to gate structure as disclosed by Russ et al. in the device of Lee et al., since this will improve the resolution of the display.

***Allowable Subject Matter***

Claims 3, 5 & 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 3, the prior art of record neither teaches nor suggests the limitation of having each second aperture covers an opening range of a plurality of first apertures, together with other cited limitations.

Regarding claim 5, the prior art of record neither teaches nor suggests the limitation of having each third aperture covers an opening range of a plurality of first apertures, together with other cited limitations.

Regarding claim 9, the prior art of record neither teaches nor suggests the limitation of having each of the second apertures is aligned with a plurality of corresponding first apertures, together with other cited limitations.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (571) 272-2452. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (571) 272-2457. The fax phone number for the organization is (571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Karabi Guharay*

Karabi Guharay  
Primary Examiner  
Art Unit 2879